

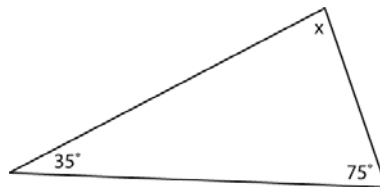
**Answer questions 1-35 on your Scantron.**

**Questions 1-30 will be scored for the Power Bowl event. In the event of a tie, questions 31-35 will be used as the tiebreaker.**

1. The average of 11, 12, 13, 14, 15, 16, 17, 18, and 19 is

- a. 15                      b. 16                      c. 19                      d. 135                      e. NG

2. Find the measure of the missing angle.



- a.  $x = 80^\circ$                       b.  $x = 250^\circ$                       c.  $x = 240^\circ$                       d.  $x = 70^\circ$                       e. NG

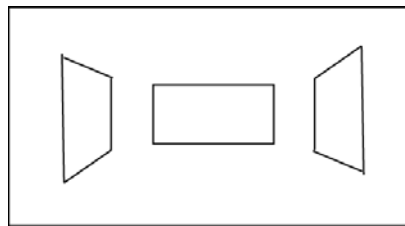
3. I need 12 pieces of fruit to make 3 glasses of juice. How many pieces of fruit do I need to make 10 glasses of juice?

- a. 30                      b. 36                      c. 40                      d. 120                      e. 2.5

4. A recipe calls for  $3\frac{3}{4}$  cups of flour. You have only  $1\frac{2}{3}$  cups left in your old bag of flour. How much flour do you need from your new bag?

- a.  $4\frac{5}{12}$  cups    b.  $5\frac{5}{12}$  cups    c.  $2\frac{1}{12}$  cups    d.  $1\frac{1}{12}$  cups    e.  $3\frac{1}{12}$  cups

5. How many lines of symmetry does this figure have?



- a. one                      b. two                      c. three                      d. four                      e. infinite

6. Solve.

$$\frac{r}{7} = -8$$

- a.  $-56$                       b.  $-\frac{7}{8}$                       c.  $-\frac{1}{56}$                       d.  $7$                       e.  $56$

7. Alisa wants to use a sample to predict how students spend their summer breaks. Which of the following is *best* to use as a sample?

- a. 20 students at summer camp                      b. 20 students in his math class                      c. 20 students on a summer baseball team
- d. 20 girls in the cafeteria                      e. 20 boys in the gymnasium

8. Which of the following is written in scientific notation?

- a.  $3.7 \times 10^5$       b.  $4^5$       c.  $2 \times 2 \times 3 \times 5$       d.  $38.25 \times 10^5$       e.  $403.1 \times 10^5$

9. Simplify.

$$\left(\frac{2}{3}\right)^3 =$$

- a. 2      b.  $\frac{6}{9}$       c.  $\frac{8}{3}$       d.  $\frac{8}{27}$       e.  $\frac{8}{9}$

10. Two lines intersect as pictured. Angle 1 and angle 2 may be called what type of angles?



- a. Supplementary      b. Vertical      c. Complementary      d. Right      e. Adjacent

11. Which of the following is a rational number?

- a.  $\sqrt{10}$       b.  $\sqrt{21}$       c.  $\sqrt{75}$       d.  $\sqrt{100}$       e.  $\sqrt{2}$

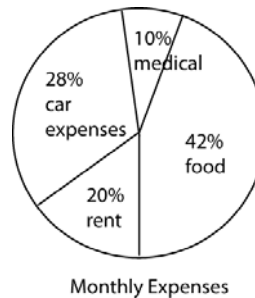
12. The selling price of a certain CD is \$9 more than the price the store paid the manufacturing company. If the selling price is \$32, which equation can be used to find the price,  $p$ , the store paid the manufacturing company?

- a.  $p + 9 = 32$       b.  $p + 32 = 9$       c.  $p - 9 = 32$       d.  $9 - p = 32$       e.  $9p = 32$

13. I was wandering around the house at 12 hours and 12 minutes before noon. I was wandering around at

- a. 11:48 A.M.    b. 12:12 A.M.    c. 11:48 P.M.    d. 12:12 P.M.    e. NG

14. The Smith's monthly income is \$2200. How much more do they spend on food than rent?



- a. \$924    b. \$616    c. \$308    d. \$484    e. \$472

15. The ratio of boys to girls in a class is 6:7. If there are 52 students in the class, how many are girls?

- a. 28    b. 4    c. 13    d. 24    e. 36

16.  $30\% \times 40\% =$

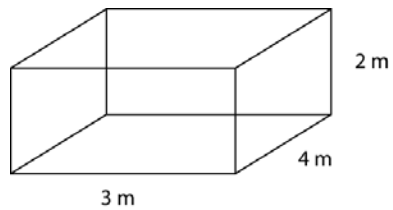
- a. 12%    b. 120%    c. 1200%    d. 12000%    e. 70%

17. Write using exponents.

$$7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot a \cdot a \cdot a \cdot a \cdot a \cdot b \cdot b \cdot b \cdot b \cdot c \cdot c \cdot c \cdot c$$

- a.  $7^5 \cdot 5a \cdot 4b \cdot 4c$       b.  $5^7 \cdot a^5 \cdot b^4 \cdot c^4$       c.  $7^5 + a^5 + b^4 + c^4$       d.  $7^5 \cdot a^5 \cdot b^4 \cdot c^4$       e. NG

18. What is the surface area of the figure shown?



- a. 52 m      b. 52 m<sup>2</sup>      c. 52 m<sup>3</sup>      d. 52 km<sup>2</sup>      e. NG

19. If the numbers denoted are written in the order of size, which will be in the middle?

- a.  $\frac{1}{3}$       b.  $\frac{3}{10}$       c. 31%      d. 0.03      e. 0.303

20. Write  $\frac{224}{416}$  in simplest form.

- a.  $\frac{7}{13}$       b.  $\frac{14}{13}$       c.  $\frac{14}{26}$       d.  $\frac{7}{26}$       e.  $\frac{112}{208}$

21. Make a stem-and-leaf plot for the following set of data.  
1.1, 1.3, 1.8, 2.2, 2.6, 2.8, 3.1, 3.8

a.

Stem	Leaf
1	1 3
2	2 6 8
3	1 8

$$1|1 = 1.1$$

b.

Stem	Leaf
1	1 3 8
2	2 6 8
3	1 8

$$1|1 = 1.1$$

c.

Stem	Leaf
1	0.1 0.3 0.8
2	0.2 0.6 0.8
3	0.1 0.8

$$1|0.1 = 1.01$$

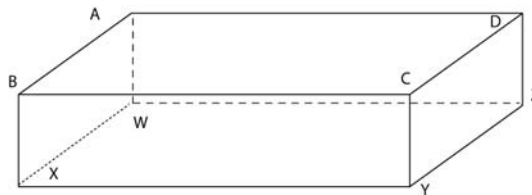
d.

Stem	Leaf
1	8 3 1
2	8 6 2
3	8 1

$$1|8 = 1.8$$

e. NG

22. The drawing below represents a rectangular solid.



Which of the following is *not* a face of the solid?

- a.  $CDZY$       b.  $WXYZ$       c.  $BXZD$       d.  $ADZW$       e.  $BCYX$

23. If two angles are adjacent, then their sum:
- a. is  $90^\circ$       b. is  $180^\circ$       c. is  $360^\circ$       d. cannot be determined      e. is  $45^\circ$
24. The difference between  $\frac{5}{6}$  and its reciprocal is
- a.  $\frac{1}{5}$       b.  $\frac{1}{6}$       c.  $\frac{1}{30}$       d.  $\frac{11}{30}$       e. 1
25. Of the following, which has the largest value?
- a. 7      b.  $(-1)^2$       c.  $(-2)^2$       d.  $(-3)^2$       e. 6
26. The digits 1, 2, 3, 4 and 9 are each used once to form the smallest possible even five-digit number. The digit in the tens place is
- a. 1      b. 2      c. 3      d. 4      e. 9
27. If an ape ate 1 banana every 4 hours, it ate   ?   bananas in 5 days.
- a. 20      b. 24      c. 30      d. 120      e. 35
28. Of the following numbers, which is closest in value to 1?
- a. 0.995      b. 0.99      c. 1.01      d. 1.1      e. 0.9919

29.  $\frac{2}{3} \times \frac{4}{5} \times \frac{6}{7} \times \frac{7}{6} \times \frac{5}{4} \times \frac{3}{2} =$
- a. 1                      b. 3                      c. 6                      d. 12                      e. NG
30. 7 is prime, so May 7<sup>th</sup> is a prime day. In all, May has ? prime days.
- a. 10                      b. 11                      c. 12                      d. 13                      e. 14
31. Each of the following is divisible by 6 *except*
- a. 3366                      b. 4422                      c. 6630                      d. 6633                      e. 2244
32. Which of the following data sets has the same mean, median, and mode?
- a. 0,1,2,3,4                      b. 1,1,2,3,3                      c. 1,2,2,2,3                      d. 3,3,3,3,4                      e. NG
33. If 3 out of 5 dentists recommend sugarless gum, what percent *don't* recommend sugarless gum?
- a. 20%                      b. 30%                      c. 40%                      d. 60%                      e. 25%
34. Find the equivalent expression.  
 $1^3 + 2^4 =$
- a.  $1^4 + 3^2$                       b.  $1^3 + 4^2$                       c.  $1^2 + 4^3$                       d.  $1^1 + 3^4$                       e. NG
35. Write the repeating decimal .108108108... as a fraction in lowest terms.
- a.  $\frac{108}{1000}$                       b.  $\frac{108}{999}$                       c.  $\frac{4}{37}$                       d.  $\frac{36}{333}$                       e.  $\frac{18}{111}$